MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

SUPPLEMENTARY EXAMINATION

TRIMESTER 1, 2015/2016

TCS2411/TSE2101 - SOFTWARE ENGINEERING FUNDAMENTALS

(All Sections/Groups)

17 NOV 2015
2.30 PM – 4.30 PM
(2 HOURS)

INSTRUCTIONS TO STUDENTS

1. This question paper consists of **FOUR** printed pages, including the cover page. Attempt **FIVE** out of six questions.

2. The mark distribution for each question is given.

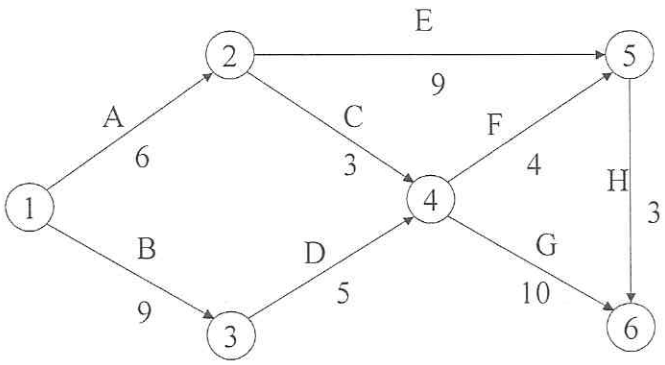
3. Please write all your answers in the answer booklet provided.

QUESTION 1

(a) What are umbrella activities in a software engineering project? List and describe any two examples of umbrella activities.

[4 marks]

(b) Produce the activity precedence table for the following network diagram. Identify the critical path for this project.



[6 marks]

QUESTION 2

(a) Describe any four tasks in Requirements Engineering.

[4 marks]

(b) In Requirements Analysis, different diagrams are drawn to model the representations of the requirements of a software system. Describe any two of these diagrams and illustrate each one with the diagrams you created in the group assignment or any other example.

[6 marks]

QUESTION 3

(a) An analysis to be carried out for requirements modelling of Web application is Configuration Analysis where the environment and infrastructure in which the Web application resides are described in detail. Identify and describe three other types of analysis to be conducted for requirements modelling of Web applications.

[3 marks]

(b) Represent the 'Layered Architectural' style in a diagram with each layer correctly labelled. [4 marks]

Continued...

(c) Explain what is meant by a useful software product. [3 marks]

QUESTION 4

(a) Quality control encompasses a set of software engineering actions that help ensure that each work product meets its quality goals. Describe four of these software engineering quality control actions. [4 marks]

(b) Define software reliability in statistical terms. [1.5 marks]

(c) What is meant by the following statement?
"A software is estimated to have a reliability of 0.999 over eight elapsed processing hours" [1.5 marks]

(d) One of the good practices in designing user friendly graphical interface is to create consistent interface, for example, always place the 'Login' icon at the top right corner of the page. Identify and describe by using examples, two other good practices in designing user friendly graphical interfaces. [3 marks]

QUESTION 5

(a) What is a defect amplification model? Draw this model. [3 marks]

(b) Explain how an organisation manages the many existing versions of a program (and its documentation) in a manner that will enable changes to be accommodated efficiently.

[3 marks]

(c) List and describe any two elements in software configuration management that help in maintaining the software changes.

[4 marks]

QUESTION 6

(a) Explain how Formal Technical Review (FTR) is conducted in a project.

[2 marks]

Continued...

(b) List and describe any two types of high order system testing that can be conducted after a software has been integrated.

[2 marks]

(c) Define Computer Aided Software Engineering (CASE). Give two examples of CASE Tool that support in software development and briefly explain the purpose of each tool that you mentioned.

[6 marks]

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